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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,605	08/20/2003	Edward Williams	GOEA 02316 C1US	5988
32233	7590	05/13/2005	EXAMINER	
STORM L.L.P. BANK OF AMERICA PLAZA 901 MAIN STREET, SUITE 7100 DALLAS, TX 75202			EDGAR, RICHARD A	
			ART UNIT	PAPER NUMBER
			3745	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No. 10/644,605	Applicant(s) WILLIAMS, EDWARD	
	Examiner Richard Edgar	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2005 under 37 CFR § 1.114.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-35 is/are allowed.
- 6) ☒ Claim(s) 23-31 and 36-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04 January 2005 has been entered.

Response to Arguments

Applicant's arguments filed 04 January 2005 have been fully considered but they are not persuasive.

Applicant first argues that the claimed invention has plates and tiles arranged in such a way to provide for slight flexibility of the plates and tiles in relation to other plates and tiles, whereas the Hayashi et al. reference applied by the examiner does not disclose or suggest attaching the plates or tiles to the fan blade in such a manner so as to enable the tiles and plates to move slightly in relation to each other. In an attempt to support this argument, the applicant cited the original disclosure, specifically page 6, lines 17-20 and lines 33 through 4 spanning pages 6 and 7. This argument is unpersuasive.

If the examiner were to find this argument persuasive, either the claims would be indefinite or the specification would be non-enabling under 35 U.S.C. § 112. The

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original disclosure describes the use of a series individual plates and tiles rather than a single large plate and tile for providing flexibility. With respect to the Hayashi et al. reference, clearly, the plates and tiles are a series of individual units and certainly not one large plate and tile. Applicant's conclusion that the Hayashi et al. reference does not provide for slight flexibility cannot be found persuasive since Applicant has disclosed that the instant invention has slight flexibility only because a series of individual units are used instead of a single large unit; and Hayashi et al. clearly shows a series of individual units rather than a single large unit.

Applicant next argues that the Hayashi et al. reference only provides a regular seam pattern of plates along the surface of the blade. The examiner agrees with this observation, but respectfully directs applicant's attention to previously cited U.S. Patent No. 4,671,740 issued to Ormiston et al., specifically Fig. 3 wherein the blade surface of Fig. 2 is represented with tiles 20 arranged "irregularly" for the purpose of providing a continuously coated surface.

Regarding Applicant's third argument concerning Applicant's non-use of bolts and nuts, the examiner has not found such language recited in the pending claims which would distinguish the claimed invention patentable over the cited references. Applicant has not specifically pointed out claim language, but rather pointed to how Hayashi et al. has enabled their invention and concluded that the instant application is

different and therefore patentable. Furthermore, applicant has not addressed any issues of obviousness regarding the alleged patentable attachment configuration.

Lastly, applicant argues the patentability of claim 26 solely upon its dependence from claim 23, which was believed patentable based on earlier arguments. Since those arguments are not found persuasive the rejection of claim 26 has not been withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 23-25, 27-31 and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese unexamined Patent Application Hei 02-011899 (Hayashi et al. hereinafter) in view of United States Patent No. 4,671,740 (Ormiston et al. hereinafter).

Hayashi et al. show a fan assembly comprising two circular plates, a plurality of fan blades forming radial channels with the two circular plates, wherein the blades have a material secured thereto which has a layer of ceramic tiles secured thereto. The plates and tiles cause a turbulence which slows the gas rate down. The plate and tiles are bonded to the fan. The recitation of adhesive or brazing (claims 28 and 29) render the claims product by process claims (see MPEP §2113), wherein only a bonded structure is limited by the claims, and not how the structure is bonded since the method of bonding does not impart distinctive structural characteristics to the final product. A

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substrate is secured between the plates and the blade (numeral 8, Figure 9). There are no exposed edges of tiles and plates adjoining the fan blade and side members (see Figs. 2 and 9). When using only tiles arranged along one plane, the edges form a substantially straight line, however, when considering all tiles arranged on two different planes, the edges are not along a straight line. The outside edges of the "L"-shaped joint are solid, and therefore sealed.

The tiles form irregular seams whereas the plates form regular seams.

Ormiston et al. teach ceramic coated fan blades for processing materials wherein the blades have a surface comprising tiles 20 arranged irregularly (see Fig. 3) for the purpose of providing a continuously coated surface.

Since Hayashi et al. teach a continuously coated surface of a fan blade and Ormiston et al. show that the pattern may be regular (Fig. 2) or irregular (Fig. 3) so long as the surface is continuously covered, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the surface pattern of tiles to be irregular as taught by Ormiston et al. for the purpose of providing a blade surface continuous with tiles.

Claim 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese unexamined Patent Application Hei 02-011899 (Hayashi et al. hereinafter) in view of United States Patent No. 4,671,740 (Ormiston et al. hereinafter) as applied to claim 23 above, and further in view of United States Patent No. 4,884,820 (Jackson et al. hereinafter).

Hayashi et al. show the use of ceramic tiles for withstanding a high temperature environment of gases, but do not recite the use of a metal carbide.

Jackson et al. show a blade exposed to high temperature combustion gases having an area made of either ceramic or a metal carbide for the purpose of forming a labyrinth seal for high temperature gases.

Since Hayashi et al. show an impeller with ceramic tiles for handling high-temperature gases and Jackson et al. teach for high temperature gas environments a ceramic or metal carbide material may be used for forming a labyrinth seal, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the ceramic material of Hayashi et al. to be a metal carbide as taught by Jackson et al. for the purpose of forming a labyrinth seal for high temperature gases.

Allowable Subject Matter

Claims 32-35 are allowed for reasons previously indicated.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Edgar whose telephone number is (571) 272-4816. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7 am- 5 pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Richard Edgar
Examiner
Art Unit 3745

RE



EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
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5/16/05